

Program

Monday 31 August

Morning Session Chair: Glenn Starkman

- 09:00-09:20 Registration
- 09:20-10:00 Nicola Bartolo “Probing the nature of inflation via CMB and GWs”
- 10:00-11:15 Mattia Dubbini “Inflationary magnetogenesis with massive vector fields and Schwinger effect”
- Nino Kochiashvili “Some Problems Between the Classical Big Bang Theory and Observational Data”
- Antonino Marino “Stealth fields in cosmology: primordial magnetogenesis and the Theta-shift redefinition method”
- 11:15-11:45 Coffee Break
- 11:45-12:25 Fabio Finelli “The H0 world cup. A comprehensive competition between proposed Hubble tension solutions”
- 12:25-12:50 Tommaso Mengoni “Scalar perturbations from a two-field unified warm-inflationary cosmological model”
- 12:50-14:20 Lunch

Afternoon Session Chair: Daniela Paoletti

- 14:20-15:00 Massimiliano Lattanzi “From CMB data to fundamental physics: data-analysis challenges for next-generation CMB experiments”
- 15:00-16:15 Chiara Animali “A Forest of Primordial Black Holes: Type I and Type II Formation in Stochastic Inflation”
- Matteo Galaverni “Redshift-dependent cosmic birefringence from pseudoscalar fields”
- Avinash Anand “Next-generation CMB polarization data reduction: Scalable map-making and $1/f$ noise mitigation with BrahMap”
- 16:15-16:45 Coffee Break
- 16:45-17:25 Carlo Baccigalupi “Computational Resources and Simulation Realism in the Era of Cosmological Probe Combination”
- 17:25-17:50 Yang Liu “AliCPT First-Season Data Analysis and Preliminary Results”
- 17:50-18:50 Discussion Session “TBD”
- 18:50-19:30 Welcome Aperitif

Tuesday 1 September

Morning Session Chair: Stefano Anselmi

- 09:20-10:00 Deyan Mihaylov “Computing the information content of the observable Universe”
- 10:00-11:15 Glenn Starkman “The Universe is not statistically isotropic”
- Tatsuaki Wada “Reframing information geometry via symmetric teleparallel gravity”
- Eugene Oks “Dark Hydrogenic Atoms and Ions as Baryonic Dark Matter and their Role in Structure Formation”
- 11:15-11:45 Coffee Break
- 11:45-12:25 Angelo Caravano “Inflation on the lattice”
- 12:25-12:50 Andrea Iacobellis “Are Oscillons in Non-Minimally Coupled Theories Frame-Covariant?”
- 12:50-23:00 Lunch + Social Activity + Social Dinner (see website for the programs)

Wednesday 2 September

Morning Session Chair: TBC

- 09:20-10:00 Niall Jeffrey “Decoding dark energy: simulation-based inference with galaxy surveys”
- 10:00-11:15 Stefano Anselmi “The challenges of using Baryon Acoustic Oscillations distances for cosmology”
- Francesca Passalacqua “Addressing Systematics in Large Galaxy Surveys: a new approach to exploit data and simulations”
- Federico De Luca “Improving H_0 constraints from joint Planck and XMM-Newton observations of galaxy clusters”
- 11:15-11:45 Coffee Break
- 11:45-12:25 Anik Halder “Scalable inference of redshifts and galaxy properties under the pop-cosmos generative population model”
- 12:25-12:50 Anna Chiara Alfano “Mapping the redshift drift at various redshifts through cosmography”
- 12:50-15:20 Lunch + Guided tour of Jesi

Afternoon Session Chair: TBC

- 15:20-16:00 Giuseppe Puglisi “Galactic Foreground emission with Neural networks”

16:00-16:25	Tornatore Felix “The ADELINe suite: simulations of galaxy clusters in non-standard dark energy models”
16:25-16:55	Coffee Break
16:55-17:25	Nathaniel Starkman “Mapping Gravity with Extragalactic Streams”
17:25-17:50	Marco Bruni “Newtonian and GR simulations on nonlinear scales: from frame-dragging to massive BH seeds”
17:50-18:50	Discussion Session “TBD”

21:00-22:00	Nathaniel Starkman - Public Seminar (ENG): “Following the Stars: How Stellar Streams Reveal Dark Matter”

Thursday 3 September

Morning Session Chair: Amirmohammad Chegeni

09:20-10:00	Angelo Ricciardone “TBD”
10:00-11:15	Serena Gambino “Charged accretion Tori around Schwarzschild black hole: self-generated electromagnetic fields and their effect on disc structure”
	Gabriele Bianchini “Quasinormal Modes as Spectral Probes of Spacetime Geometry: From Plebański-Demiański to Black Hole Mimickers”
	Nino Kochiashvili “How the Big Collaboration is Trying to Find Optical Counterparts of GWs”
11:15-11:45	Coffee Break
11:25-12:55	Agata Trovato “Machine learning methods in gravitational waves searches”
12:55-13:20	Francesco Sorrenti “Anisotropic expansion in the Laniakea region from supernovae luminosity-distance kinematics”
13:20-14:20	Lunch

Afternoon Session Chair: TBC

14:20-15:00	Bin Hu “The mass model and LoS effects on Time-delay Cosmography”
15:00-16:15	Martin Gerini “ Scalable early warning for BNS mergers in next-generation ground-based detectors using SBI”
	Amirmohammad Chegeni “A Spline Persistence Model for Euclid NISP H2RG Detectors”
	Hong Li “AliCPT-1 in the Northern Sky: Progress Review and Future plan”
16:15-16:45	Coffee Break
16:45-17:25	Enrico Barausse “Gravitational waves: where data science meets physics”

17:25-17:50 Huanyuan Shan “AI-Driven Cosmology in the CSST Era”

17:50-18:50 Discussion Session “TBD”

21:00-22:00 Gianluca Castignani - Public Seminar (ITA): “Dall’Universo lontano all’energia oscura: l’eredità di Hubble e le nuove frontiere con Euclid”

Friday 4 September

Morning Session Chair: Alessandro Renzi

09:20-10:00 Alessandro Romeo “Preparing Cosmological Simulations for heterogeneous European clusters: CINECA's Contributions to OpenGadget within the SPACE-CoE”

10:00-11:15 Andrea Martini “FAST Computing”

Stefano Penna “Thales Alenia Space Italia”

TBC

11:15-11:45 Coffee Break

11:45-12:25 Gianluigi Rozza “Accelerating Innovation — Why the University–Industry Bridge Needs Scientists Who Cross It”

12:25-13:25 Discussion Session “TBD”

END OF CONFERENCE